

Access DB# 138926**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 11-29-04
 Art Unit: 1752 Phone Number 302-1333 Serial Number: 101085, 935
 Mail Box and Bldg/Room Location: 9566 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Please see attached B:6

Inventors (please provide full names): _____

SCIENTIFIC REFERENCE BR
Sci & Tech INFO Ctr

NOV 30

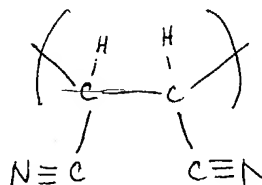
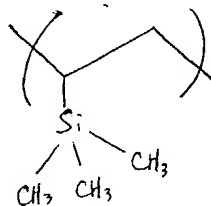
Earliest Priority Filing Date: _____

Pat. & T.M. Office

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

✓ Please search the polymer
having both of the repeat units

This
search
is for
Polymer C
of Cl.#17

*****
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Searcher: EL
 Searcher Phone #: _____
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 Searcher Prep & Review Time: _____
 Clerical Prep Time: _____
 Online Time: _____

Type of Search

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 AA Sequence (#) _____
 Structure (#) _____
 Bibliographic _____
 Litigation _____
 Fulltext _____
 Patent Family _____
 Other _____

Vendors and cost where applicable

STN _____
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 Dr.Link _____
 Lexis/Nexis _____
 Sequence Systems _____
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 Other (specify) _____



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Bib Data Sheet

CONFIRMATION NO. 4343

SERIAL NUMBER 10/085,935	FILING DATE 03/01/2002 RULE	CLASS 430	GROUP ART UNIT 1752	ATTORNEY DOCKET NO. KOJIM-448
APPLICANTS Takanobu Takeda, Nakakubiki-gun, JAPAN; Jun Hatakeyama, Nakakubiki-gun, JAPAN; Toshinobu Ishihara, Nakakubiki-gun, JAPAN; Tohru Kubota, Nakakubiki-gun, JAPAN; Yasufui Kubota, Nakakubiki-gun, JAPAN;				
** CONTINUING DATA ***** None S.T.L.				
** FOREIGN APPLICATIONS ***** JAPAN 2001-056543 03/01/2001 S.T.L.				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 03/22/2002				
Foreign Priority claimed <input checked="" type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after met <input type="checkbox"/> Allowance <input checked="" type="checkbox"/> S.T.L. Verified and Acknowledged <input checked="" type="checkbox"/> Examiner's Signature Initials		STATE OR COUNTRY JAPAN	SHEETS DRAWING 2	TOTAL CLAIMS 12
			INDEPENDENT CLAIMS 1	
ADDRESS 23599				
TITLE Silicon-containing polymer, resist composition and patterning process				
FILING FEE RECEIVED 1092	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	

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 E C5H12SI
L1 209 S E3
 E C4H2N2
L2 293 S E3
L3 1 S L1 AND L2

FILE 'ZCAPLUS' ENTERED AT 17:55:54 ON 03 DEC 2004

L4 1 S L3

=> file zcaplus

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L4 ANSWER 1 OF 1 ZCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:671932 ZCAPLUS
DN 137:202031
ED Entered STN: 06 Sep 2002
TI Preparation and patterning process of silicon-containing chemical
amplification positive resist compositions
IN Takeda, Takanobu; Hatakeyama, Jun; Ishihara, Toshinobu; Kubota,
Tohru; Kubota, Yasufumi
PA Shin-Etsu Chemical Co., Ltd., Japan
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C08F030-08

ICS G03F007-075; C08G077-00

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 76

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1236745	A2	20020904	EP 2002-251419	20020228
EP 1236745	A3	20040324		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002348332	A2	20021204	JP 2002-47351	20020225
US 2002168581	A1	20021114	US <u>2002-85935</u>	20020301
PRAI JP 2001-56543	A	20010301		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1236745	ICM	C08F030-08
	ICS	G03F007-075; C08G077-00
EP 1236745	ECLA	C08F030/08; G03F007/075M2
AB	Novel silicon-contg. polymers, which are obtained by copolymerizing vinylsilane with a compound having a low electron-d. unsatd. bond such as maleic anhydride, maleimide derivs. or tetrafluoroethylene, are suitable as the base resin in chem. amplified pos. resist compns. used for micropatterning in a process for the fabrication of semiconductor devices. The resist compns., which are sensitive to high-energy radiation, such as deep-UV light, laser beams, electron beams or X-rays, can form high aspect ratio patterns with high sensitivity and resolu. as well as improved resistance to oxygen or halogen gas plasma etching. Thus, maleic anhydride and trimethylvinylsilane were polymerized in THF using radical polymerization technique; the silicone polymer, photoacid generator, dissolution inhibitor were thoroughly dissolved in propylene glycol monomethyl ether acetate; the resist soln. was spin coated onto cured DUV-30/novolac resist substrate and then baked at 100.degree. for 90 s to form a resist film of 0.2 .mu.m, followed by exposing to laser beam, baking at 100.degree. for 90 s, and developing in TMAH to obtain a pos. pattern; the resist pattern was then evaluated in sensitivity, resolu., and etc.	
ST	silicon contg chem amplification pos resist compn patterning process; maleimide vinyl polymer semiconductor device radiation sensitive resist; maleic anhydride trimethylvinylsilane copolymer	

- resist device
- IT Positive photoresists
 - (UV; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT Phenolic resins, uses
 - (novolak, substrate layer; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT Resists
 - (pos.-working radiation-sensitive; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT Electron beam resists
 - (pos.-working; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT Etching
 - Semiconductor device fabrication
 - (silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT Polymers, preparation
 - (silicon-contg.; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT 26702-38-5P, Maleic anhydride-trimethylvinylsilane copolymer
452912-28-6P, N-Methylmaleimide-trimethylvinylsilane copolymer
452912-29-7P 452912-30-0P, Trimethylvinylsilane-tetrafluoroethylene copolymer 452912-31-1P, Maleic anhydride-vinylheptamethylcyclotetrasiloxane copolymer
452912-32-2P, Maleic anhydride-bis(trimethylsilylmethyl)vinylmethylsilane) copolymer 452912-33-3P, Maleic anhydride-vinylheptamethylcyclotetrasiloxane-1-ethylcyclopentyl methacrylate copolymer 452912-34-4P, Maleic anhydride-bis(trimethylsilylmethyl)vinylmethylsilane-1-ethylcyclopentyl methacrylate copolymer 452912-35-5P, Maleic anhydride-vinylheptamethylcyclotetrasiloxane-2-ethyl-2-adamantyl methacrylate copolymer 452912-65-1P, Maleic anhydride-trimethylvinylsilane-1-ethylcyclopentyl methacrylate copolymer
 - (cured and uncured; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT 409321-21-7 409321-23-9
 - (dissoln. inhibitor; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT 66003-76-7 66003-78-9
 - (photoacid generator; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT 84540-57-8, Propyleneglycol monomethyl ether acetate
 - (solvent; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)
- IT 59269-51-1, Polyhydroxystyrene
 - (substrate layer; silicon-contg. chem. amplification pos. resist compns. and patterning process thereof)

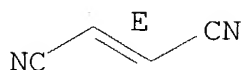
IT 81458-41-5, OFPR-800
(substrate; silicon-contg. chem. amplification pos. resist
comps. and patterning process thereof)
IT 452912-29-7P
(crued and uncured; silicon-contg. chem. amplification pos.
resist comps. and patterning process thereof)
RN 452912-29-7 ZCAPLUS
CN 2-Butenedinitrile, (2E)-, polymer with ethenyltrimethylsilane (9CI)
(CA INDEX NAME)

CM 1

CRN 764-42-1

CMF C4 H2 N2

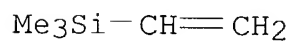
Double bond geometry as shown.



CM 2

CRN 754-05-2

CMF C5 H12 Si



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